

MEMORANDUM

TO:	Joshua W. Hall, P.E.	DATE:	February 5, 2014 Updated March 26, 2014
FROM:	Victor S. Krea, P.E	PROJECT NO.:	10738H
SUBJECT:	Water and Sewer Rate Study Findings and Recommendations		

Introduction

The Town of Westminster recently requested that Wright-Pierce perform a rate study in order to assess the financial impacts of the proposed Capital Improvement Programs (CIPs) for the water and sewer infrastructure systems. The CIPs include specific projects within designated timeframes that are necessary to upgrade, replace or, in the case of the sewer system, expand the respective infrastructure systems. The purpose of this memorandum is to report our findings so that the Town will be aware of any modifications that may be required in the rates in order to implement the recommended CIPs.

The analysis was performed based on information provided by the Town regarding current rates and rate history; revenues and expenses for the past three years; and detailed debt service requirements. The water and wastewater CIPs have been prepared by Wright-Pierce and have been reviewed and approved by the Town. Copies of the water and wastewater CIPs are attached for reference.

It should be noted that the estimated annual expenses attributable to the CIPs do not include any interest or other financing charges. At this time the manner of financing the respective water and wastewater CIP projects is not known. The actual annual expenses may be lower or higher than those currently shown on the respective CIPs and in the rate projections.

Current Water Rates

The water rates were increased by about 33 percent in FY 2012 and by another 5 percent in FY 2013 as a result of increased operating expenses, funding reserves for emergency repairs and operations, and in anticipation of the upcoming capital improvement needs. The rates for 2012 were \$48.96 biannually for the first 6,000 or fewer gallons, and \$8.16 per 1,000 for all over 6,000 gallons. This results in a total annual charge of \$734 for the average user (90,000 gallons per year). It should be pointed out that, prior to the FY 2012 increase, the water rates in Westminster have been relatively stable since at least FY 2005, having increased a total of only 10 percent over the six-year period.

According to the 2012 Massachusetts Water Rate Survey conducted by Tighe & Bond, the average annual charge in 2012 was \$498 for a use of 90,000 gallons per year. Therefore, the average annual charge in Westminster was about 47 percent above the state average in 2012. The 5 percent increase in 2013 resulted in an average annual charge of \$771, which is about 55 percent above the state average in 2012.

Present and Projected Water Revenues and Expenses

Actual water revenues and expenses for FY 2010 through FY 2012 and budgeted revenues and expenses for FY 2013 and FY 2014 were provided by the Town. Based on the information supplied by the Town, the revenues and expenses were then projected through FY 2018, with the revenue line items essentially remaining stable and applicable expenses items being increased by 4 percent annually to account for inflation. Expense line items such as the principal and interest payments and the transfer to capital reserve fund were projected based on more detailed information provided by the Town. The annual water CIP expenses were projected based on the CIP developed during this project.

Annual revenues from water use charges were projected by calculating the revenue needed to balance the revenues and expenses annually. Transfers from the General Fund were calculated based on the annual principal and interest payments, water main upgrades, and CIP expenses.

Water Rate Impacts

In order to assess the impacts of the CIP on the water rates, the annual revenues and expenses were initially projected through FY 2018 with no rate increases. The results of this projection are shown on the attached spreadsheet entitled "Projected Water Revenues and Expenses, Includes Capital Improvement Program – No Rate Increases." From this projection it can be seen that, without additional rate increases, the annual and cumulative revenue will begin to decline steadily, resulting in an annual deficit in FY 2018 of \$274,551 and a cumulative deficit of \$555,445. Ideally, annual revenues should exceed expenses so that a surplus can be accumulated, rather than being depleted to cover any shortfalls in annual revenues, in case of emergency.

Revised projections were then calculated based on the annual rate increases or decreases required to equalize the revenue and expenses in each year. These projections show that the water rates will need to be increased by about 27 percent in FY 2015 to account for the expenses associated with the water main improvement program and the capital improvement program. Minor increases of about 2 to 3 percent will be required in FY 2016 through FY 2018 in order to equalize the revenues and expenses in those years. The results of this projection are shown on the attached spreadsheet entitled "Projected Water Revenues and Expenses, Includes Capital Improvement Program."

Current Sewer Rates

The sewer rates were also increased by 33 percent in FY 2012 as a result of increased operating expenses and in anticipation of the upcoming capital improvement needs. The rates for 2012 were \$56.304 biannually for the first 6,000 or fewer gallons, and \$9.384 per 1,000 for all over 6,000 gallons. This results in a total annual charge of \$845 in FY 2012 for the average user (90,000 gallons per year).

According to the 2012 Massachusetts Sewer Rate Survey, the average annual charge in 2012 was \$690 for a use of 90,000 gallons per year. Therefore, the average annual charge in Westminster in 2012 was about 22 percent above the state average. The sewer rates were further increased by another 68 percent in FY 2013 due to the City of Fitchburg increasing the annual charge to the Town of Westminster for wastewater conveyance and treatment by 68 percent. Westminster's average annual charge in 2013 increased to \$1,419, which is about 106 percent above the state average in 2012.

The sewer rates have also been stable during the past six years even though the annual operating costs and the increases in Fitchburg's charges have far exceeded the Town's sewer rate increases. In order to minimize the sewer rate increases during this period, the Town has been using retained earnings to balance the operating budget. However, the surplus funds (retained earnings) have been largely expended and it will no longer be possible to continue this practice.

Present and Projected Sewer Revenues and Expenses

Actual sewer revenues and expenses for FY 2010 through FY 2012 and budgeted revenues and expenses for FY 2013 and FY 2014 were provided by the Town. Based on the information supplied by the Town, the revenues and expenses were then projected through FY 2018, with the revenue line items essentially remaining stable and applicable expense items being increased by 4 percent annually to account for inflation. Expense line items such as the principal and interest payments and the transfer to capital reserve fund were projected based on more detailed information provided by the Town. The annual wastewater CIP expenses were projected based on the CIP developed during this project.

Annual revenues from sewer usage charges were projected by calculating the revenue needed to balance the revenues and expenses annually. Transfers from the General Fund were calculated based on the annual principal and interest payments and CIP expenses.

Sewer Rate Impacts

In order to assess the impacts of the CIP on the sewer rates, the annual revenues and expenses were initially projected through FY 2018 with no rate increases. The results of this projection are shown on the attached spreadsheet entitled "Projected Sewer Revenues and Expenses, Includes Capital Improvement Program – No Rate Increases." From this projection it can be seen that, without rate increases, the annual and cumulative revenue will decline steadily, resulting in an annual deficit in FY 2018 of \$560,936 and a cumulative deficit of \$832,948. Similar to the water, annual revenues should exceed expenses so that a surplus can be accumulated, rather than being depleted to cover any shortfalls in annual revenues, in case of emergency.

In order to eliminate these substantial deficits, revised projections were calculated based on annual rate increases required to equalize the revenue and expenses in each year. These projections show that annual rate increases ranging from 0.6 percent in FY 2015 to 44.6 percent in FY 2018 in order to fund the capital improvement program and meet all other expenses. The results of this projection are shown on the attached spreadsheet entitled "Projected Sewer Revenues and Expenses, Includes Capital Improvement Program and Siphon Project." It should

be noted that the siphon project cost has been updated based on the current estimated cost and projected project funding. The estimated annual debt repayment for this project has been shown separately from the remaining CIP items and is reflected in the projected sewer rate in the spreadsheet.

Summary of Findings

The findings resulting from this evaluation can be summarized as follows:

1. Westminster increased the water rates by just over 33 percent in FY 2012 and 5 percent in FY 2013 in anticipation of implementing the recently developed water CIP and the water main improvement program.
2. The \$734 FY 2012 average annual water use charge was about 47 percent higher than the state average but was less than 1 percent of the median household income (MHI) in Westminster (\$79,073 per year in 2010 Census), and was well within the affordability guidelines recommended by USEPA for annual water use charges (2 percent of MHI).
3. The 5 percent increase in FY 2013 increased the average annual water use charge to \$771, which is still less than 1 percent of the MHI.
4. Further increases in the water rates will be necessitated by the upcoming implementation of the CIP and the water main improvement program.
5. The revenue and expense projections show that water rate increases ranging from 2.3 percent to 26.6 percent will be required to fund these improvement programs and meet all other expenses. It may be prudent to smooth the annual increases so that none are substantially higher or lower than others.
6. By FY 2018 the average annual water use charge is projected to be \$1,054, which is 1.3 percent of the 2010 MHI but will likely be less than 1 percent of the 2018 MHI, both of which are well within the EPA affordability guidelines.
7. Sewer rates were increased by 33 percent in FY 2012 in anticipation of implementing the wastewater CIP. Rates were increased by another 68 percent in FY 2013 due to the fact that Fitchburg increased its charge to Westminster by 68 percent.
8. The \$845 FY 2012 average annual sewer use charge was about 22 percent above the state average and was 1.1 percent of the MHI, well within the EPA affordability guidelines.
9. The 68 percent increase in FY 2013 increased the average annual sewer use charge to \$1,419, which is about 1.8 percent of the MHI, which is approaching the EPA affordability guidelines.
10. Further increases in the sewer rates will be necessitated by the upcoming implementation of the wastewater CIP.
11. The revenue and expense projections show that sewer rate increases ranging from 0.6 percent to 44.6 percent will be required to fund the CIP and meet all other expenses. Similar to the water, it may be prudent to smooth the annual increases.
12. By FY 2018 the average annual sewer use charge is projected to be \$2,396, which is 3 percent of the 2010 MHI but will likely be close to 2 percent of the 2018 MHI and, therefore, reasonably within the EPA affordability guidelines.

Recommendations

Based on the results of this analysis and the findings summarized above, we recommend the following:

1. Increase the water rates by an average of 8 to 9 percent per year for the next four years in order to have sufficient revenues to fund the CIP and the water main improvement program.
2. Increase the sewer user rates by an average of about 15 percent per year for the next four years in order to have sufficient revenues to fund the CIP.
3. Regularly compare the actual annual revenues and expenses with those projected in this study to ascertain whether any modifications to the above recommendation need to be made.
4. Re-evaluate the sewer user rates every three years or so to account for the financial impacts of any additional capital improvements that may be necessary, or for any other substantial changes in the revenue or expense line items, including long-term financing of specific CIP projects.

**20-Year Capital Improvement Plan (CIP)
Westminster Water Department**

Improvement	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Water Main Upgrades (~1,500 LF/Year)	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000	\$240,000
Hager Park Pumping Station Upgrades							\$32,000													
South Street Pumping Station Upgrades									\$76,250	\$76,250	\$76,250	\$76,250								
Ellis Road Tank Repainting	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000										
Shady Avenue Tank Repair			\$43,750	\$43,750	\$43,750	\$43,750														
Knower Road Booster Station													\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Telemetry Upgrades							\$37,500	\$37,500												
Large Meter Upgrades	\$35,000	\$35,000																		
	\$342,000	\$342,000	\$350,750	\$350,750	\$350,750	\$350,750	\$376,500	\$344,500	\$383,250	\$383,250	\$316,250	\$316,250	\$315,000	\$315,000	\$315,000	\$315,000	\$315,000	\$315,000	\$315,000	\$315,000

Town (Worcester County)	Total Population ¹	Shared Water System? (Y/N)	Pop. Served	Annual Cost	Base Rates (\$)	interim calc.	Base Rates - per 3740 gals - where 3740 is equal to HCF *5 (\$)	Comments - Water
Westminster	7,765	Y	3,300	\$771	8.57/1000 gals	3.74	\$32	
Ashburnham	6,081	Y	4,535	\$450	35/500 CF	NA	\$35	Base charge: \$35.00 per bill includes first 500 CF. \$2.00/HCF - 501 - 2,500 CF; \$2.50/HCF - 2,501 - 4,500 CF; \$3.50/HCF - above 4,500 CF. There is a water tank debt service fee for customers on new tank - a flat fee of \$5.00 for the first 500 CF usage plus an increased rate of \$0.80/HCF for usage above 500 CF. Our calculation assumes customer is subject to the water tank debt service.
Douglas	8,471	N	NR	\$430	3.17/HCF	5.00	\$16	Notes: Basic service charge \$25.00. Per Town website.
Harvard	6,520	N						
Lancaster	8,055	N	1,900	\$562	46.85/7480 gals	2.00	\$23	Notes: Base charge: \$46.85 per billing includes first 1,000 CF; \$4.68/HCF - 1,100 - 3,500 CF; \$6.18/HCF - 3,600 - 10,000 CF; \$8.41/HCF - 10,100 - 30,000 CF. Per Town website.
Rutland	7,973	N	4,550	\$523	3.36/HCF	5.00	\$17	Notes: \$3.36/HCF - first 500 CF; \$4.48/HCF - 501 - 2,500 CF; \$4.89/HCF - 2,501 - 3,500 CF; \$6.56/HCF - 3,501 and over. Town estimates annual cost at \$426. Connection charge: \$1,300.
Sterling	7,808	N	2,270	\$503	50/4,000 gals	0.94	\$47	Notes: Base charge: \$50.00 per billing includes first 4,000 gals.; \$4.10/1000 gals. - 4,001 - 30,000 gals.; \$4.50/1000 gals - 30,001 - 50,000 gals.; \$5.25/1000 gals. - 50,001 - 75,000 gals.; \$5.70/1000 gals. - 75,001 - 100,000 gals.; \$6.50/1000 gals. - more than 100,000 gals. Town reports annual cost at \$400.
Templeton	8,013	N	7479 / 2200	\$801	8.90/1000 gals	3.74	\$36	Notes: Connection fee: \$2,937. Inspection fee: \$50.00. Irrigation rate: \$8.33/1,000 gals.
Upton	7,542	N	4,400	\$500	2.96/1000 gals	3.74	\$15	Notes: Service charge -\$30.60. \$2.96/1000 gals. 0 - 6,000 gals.; \$3.98/1000 gals. - 6,001 - 15,000 gals.; \$5.17/1000 gals. 15,001 - 40,000 gals.; \$7.29/1000 gals. over 40,000 gals.
West Boylston	7,669	N	6,700	\$342	2.85/1000 gals	3.74	\$11	Notes: Minimum charge - \$25.00. \$2.85/1000 gals. 0 - 6,250 gals.; \$3.40/1000 gals. 6,251 - 12,500 gals.; \$4.65/1000 gals. 12,501 - 25,000 gals.; \$5.55/1000 gals. For over 25,000 gals.
Shirley	7,211	N	4,400	\$549	4.90/HCF	5	\$25	Notes: Base charge: \$27.00 per billing includes 750 CF. 0 to 10,000 CF - \$4.90/HCF; 10,001 to 20,000 CF - \$5.50/HCF; greater than 20,001 CF - \$6.30/HCF. Connection fee: \$4000 (1" service).

Min= \$342
Mean= \$543
Max= \$801
State Avg= \$498

Notes:

HCF = Hundred Cubic Feet (748 gallons)

Orange font indicates the website number of customers vs. Tighe and Bond reported numbers

¹ Total populations were found using the 2010 Census data from www.census.gov

Grey shading indicates that data was not available from Tighe and Bond analysis.

1. The population of Westminster was reported most recently by the town website to be at 7,765 - as of November 2012.
2. Annual cost is based on a usage of 120 HCF, or 90,000 gallons.

WESTMINSTER WATER AND SEWER RATE STUDY
 PROJECTED WATER REVENUES AND EXPENSES
 INCLUDES CAPITAL IMPROVEMENT PROGRAM - NO RATE INCREASES
 UPDATED MARCH 2014

Present and Projected Water Revenues and Expenses										
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	
	Actual	Actual	Actual	Budget	Proposed	Projected	Projected	Projected	Projected	Projected
Revenue										
Water usage charges	\$565,064	\$605,190	\$714,428	\$750,150	\$750,150	\$750,150	\$750,150	\$750,150	\$750,150	\$750,150
Services, connection and insp fees	27,816	22,763	29,724	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Liens and lien interest	37,881	36,718	38,232	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Investment income	1,364	2,477	2,661	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Transfers from general fund (1)	17,821	17,850	17,828	20,070	20,217	20,182	20,281	20,184	20,088	20,088
Transfers from gen. fund for WMIP & CIP (1)	0	0	0	0	588	46,800	46,320	47,590	47,110	47,110
Miscellaneous charges	9,512	9,819	3,877	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Transfers from retained earnings	0	0	0	0	0	0	0	0	0	0
Total Revenue	\$659,458	\$694,817	\$806,750	\$830,720	\$831,455	\$877,632	\$877,251	\$878,424	\$877,848	\$877,848
Expenses										
Personnel services	\$87,919	\$96,217	\$91,160	\$103,741	\$105,255	\$109,465	\$113,844	\$118,398	\$123,133	\$123,133
Expenses	263,800	303,755	291,137	307,733	321,925	334,802	348,194	362,122	376,607	376,607
Shared costs	128,415	133,462	143,212	172,018	176,500	183,560	190,902	198,538	206,480	206,480
Capital outlay filtration plant	89,102	89,246	89,139	100,352	101,086	100,908	101,404	100,920	100,438	100,438
Transfer to reserve fund	0	0	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000
South Street water main P&I	0	0	0	107,500	106,000	104,520	103,050	101,610	100,190	100,190
Water main improve. program (WMIP) P&I	0	0	0	0	2,940	132,000	129,600	127,200	124,800	124,800
Capital improvement program (CIP) P&I	0	0	0	0	0	102,000	102,000	110,750	110,750	110,750
Capital reserve	0	0	0	0	0	0	0	0	0	0
Total Expenses	\$569,236	\$622,680	\$614,648	\$801,344	\$823,706	\$1,077,255	\$1,098,994	\$1,129,538	\$1,152,398	\$1,152,398
Net Revenue	\$90,222	\$72,137	\$192,102	\$29,376	\$7,749	-\$199,624	-\$221,743	-\$251,114	-\$274,551	-\$274,551
% of Expenses	15.8%	11.6%	31.3%	3.7%	0.9%	-18.5%	-20.2%	-22.2%	-23.8%	-23.8%
Cumulative Revenue	\$90,222	\$162,359	\$354,461	\$383,837	\$391,587	\$191,963	-\$29,780	-\$280,894	-\$555,445	-\$555,445
Minimum Charge First 6,000 Gallons (2)	\$137.500	\$137.500	\$48.960	\$51.420	\$51.420	\$51.420	\$51.420	\$51.420	\$51.420	\$51.420
Usage Charge per 1,000 Gal > 6,000 (2)	\$5.500	\$5.500	\$8.160	\$8.570	\$8.570	\$8.570	\$8.570	\$8.570	\$8.570	\$8.570
Annual Charge (semi-annual billing)										
Small User (30,000 gal/yr)	\$275	\$275	\$245	\$257	\$257	\$257	\$257	\$257	\$257	\$257
Medium User (90,000 gal/yr)	\$550	\$550	\$734	\$771	\$771	\$771	\$771	\$771	\$771	\$771
Large User (180,000 gal/yr)	\$1,045	\$1,045	\$1,469	\$1,543	\$1,543	\$1,543	\$1,543	\$1,543	\$1,543	\$1,543
Annual Increase in Percent (med user)	N/A	0.0%	33.5%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taxpayer Cost per 100K Valuation (1)	\$1.96	\$1.97	\$1.96	\$2.21	\$2.29	\$7.38	\$7.39	\$7.47	\$7.40	\$7.40
(1) Based on 20% funding of P&I, water main upgrades, and CIP from general fund.										
(2) Minimum charge in FY 2010 and 2011 was for first 20,000 gallons semi-annually.										

WESTMINSTER WATER AND SEWER RATE STUDY
 PROJECTED WATER REVENUES AND EXPENSES
 INCLUDES CAPITAL IMPROVEMENT PROGRAM
 UPDATED MARCH 2014

Present and Projected Water Revenues and Expenses										
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	
	Actual	Actual	Actual	Budget	Proposed	Projected	Projected	Projected	Projected	
Revenue										
Water usage charges	\$565,064	\$605,190	\$714,428	\$750,150	\$750,150	\$949,774	\$971,893	\$1,001,264	\$1,024,701	
Services, connection and insp fees	27,816	22,763	29,724	15,000	15,000	15,000	15,000	15,000	15,000	
Liens and lien interest	37,881	36,718	38,232	35,000	35,000	35,000	35,000	35,000	35,000	
Investment income	1,364	2,477	2,661	1,500	1,500	1,500	1,500	1,500	1,500	
Transfers from general fund (1)	17,821	17,850	17,828	20,070	20,217	20,182	20,281	20,184	20,088	
Transfers from gen. fund for WMIP & CIP (1)	0	0	0	0	588	46,800	46,320	47,590	47,110	
Miscellaneous charges	9,512	9,819	3,877	9,000	9,000	9,000	9,000	9,000	9,000	
Transfers from retained earnings	0	0	0	0	0	0	0	0	0	
Total Revenue	\$659,458	\$694,817	\$806,750	\$830,720	\$831,455	\$1,077,255	\$1,098,994	\$1,129,538	\$1,152,398	
Expenses										
Personnel services	\$87,919	\$96,217	\$91,160	\$103,741	\$105,255	\$109,465	\$113,844	\$118,398	\$123,133	
Expenses	263,800	303,755	291,137	307,733	321,925	334,802	348,194	362,122	376,607	
Shared costs	128,415	133,462	143,212	172,018	176,500	183,560	190,902	198,538	206,480	
Capital outlay filtration plant	89,102	89,246	89,139	100,352	101,086	100,908	101,404	100,920	100,438	
Transfer to reserve fund	0	0	0	10,000	10,000	10,000	10,000	10,000	10,000	
South Street water main P&I	0	0	0	107,500	106,000	104,520	103,050	101,610	100,190	
Water main improve. program (WMIP) P&I	0	0	0	0	2,940	132,000	129,600	127,200	124,800	
Capital improvement program (CIP) P&I	0	0	0	0	0	102,000	102,000	110,750	110,750	
Capital reserve	0	0	0	0	0	0	0	0	0	
Total Expenses	\$569,236	\$622,680	\$614,648	\$801,344	\$823,706	\$1,077,255	\$1,098,994	\$1,129,538	\$1,152,398	
Net Revenue	\$90,222	\$72,137	\$192,102	\$29,376	\$7,749	\$0	\$0	\$0	\$0	
% of Expenses	15.8%	11.6%	31.3%	3.7%	0.9%	0.0%	0.0%	0.0%	0.0%	
Cumulative Revenue	\$90,222	\$162,359	\$354,461	\$383,837	\$391,587	\$391,587	\$391,587	\$391,587	\$391,587	
Minimum Charge First 6,000 Gallons (2)	\$137.500	\$137.500	\$48.960	\$51.420	\$51.420	\$65.103	\$66.620	\$68.633	\$70.239	
Usage Charge per 1,000 Gal > 6,000 (2)	\$5.500	\$5.500	\$8.160	\$8.570	\$8.570	\$10.851	\$11.103	\$11.439	\$11.707	
Annual Charge (semi-annual billing)										
Small User (30,000 gal/yr)	\$275	\$275	\$245	\$257	\$257	\$326	\$333	\$343	\$351	
Medium User (90,000 gal/yr)	\$550	\$550	\$734	\$771	\$771	\$977	\$999	\$1,029	\$1,054	
Large User (180,000 gal/yr)	\$1,045	\$1,045	\$1,469	\$1,543	\$1,543	\$1,953	\$1,999	\$2,059	\$2,107	
Annual Increase in Percent (med user)	N/A	0.0%	33.5%	5.0%	0.0%	26.6%	2.3%	3.0%	2.3%	
Taxpayer Cost per 100K Valuation (1)	\$1.96	\$1.97	\$1.96	\$2.21	\$2.29	\$7.38	\$7.39	\$7.47	\$7.40	
(1) Based on 20% funding of P&I, water main upgrades, and CIP from general fund.										
(2) Minimum charge in FY 2010 and 2011 was for first 20,000 gallons semi-annually.										

Town (Worcester County)	Total Population ¹	Shared Sewer System? (Y/N)	Pop. Served	Annual Cost	Base Rates (\$)	interim calc	Base Rates - per 3740 gals - where 3740 is equal to HCF *5 (\$)	Comments - Sewer
Westminster	7,765	Y	NR	\$1,419	15.77/1000 gals	3.74	\$59	
Ashburnham	6,081	Y	1,282	\$1,260	10.50/HCF	5.00	\$53	3740
Lancaster	8,055	Y	NR	\$660	5.50/HCF	5.00	\$28	
Rutland	7,973	Y?	5,057	\$929	6.20/HCF	5.00	\$31	
West Boylston	7,669	Y	2,000	\$957	0.00904/1 gal	3,740	\$34	
Templeton	8,013	N	1,200	\$639	5.43/1000 gals	3.74	\$20	Notes: Minimum annual charge of \$300.00 per billing cycle (\$75 per quarter) includes first 8,750 gals.; \$5.43/1000 gals. for 8,751 - 15,000 gals.; \$6.79/1000 gals. for over 15,000 gals.
Upton	7,542	N	2,500	\$723	5.81/1000 gals	3.74	\$22	
Douglas	8,471	N	2,200	\$900	6.83/HCF	5.00	\$34	
Sterling	7,808							
Harvard	6,520							
Shirley	7,211							

Min= \$639
Mean= \$936
Max= \$1,419
State Avg= \$690

Notes:

HCF = Hundred Cubic Feet (748 gallons)

Orange font indicates the website number of customers vs. Tighe and Bond reported numbers

¹ Total populations were found using the 2010 Census data from www.census.gov

Grey shading indicates that data was not available from Tighe and Bond analysis.

1. The population of Westminster was reported most recently by the town website to be at 7,765 - as of November 2012.
2. Annual cost is based on a usage of 120 HCF, or 90,000 gallons.

WESTMINSTER WATER AND SEWER RATE STUDY
 PROJECTED SEWER REVENUES AND EXPENSES
 INCLUDES CAPITAL IMPROVEMENT PROGRAM - NO RATE INCREASES
 UPDATED MARCH 2014

Present and Projected Sewer Revenues and Expenses										
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	
	Actual	Actual	Actual	Budget	Proposed	Projected	Projected	Projected	Projected	
Revenue										
Committed int add to tax	\$34,317	\$29,980	\$25,974	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Sewer usage charges	380,506	404,186	489,156	820,314	820,314	820,314	820,314	820,314	820,314	820,314
Services, connection and inspection fees	12,940	9,316	56,233	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Liens	20,121	22,200	17,912	18,000	18,000	18,000	18,000	18,000	18,000	18,000
Appt'd sewer betterments	85,328	91,284	82,642	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Investment income	10,900	9,611	6,743	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Transfers from general fund (1)	163,032	159,213	155,101	150,401	145,701	140,854	136,330	131,630	127,090	
Transfers from general fund for CIP (2)	0	0	0	0	0	2,000	39,000	31,000	134,667	
Miscellaneous charges	6,923	7,349	7,487	6,500	6,500	6,500	6,500	6,500	6,500	6,500
Transfers from retained earnings	231,584	224,406	238,600	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Total Revenue	\$945,651	\$957,545	\$1,079,848	\$1,268,215	\$1,263,515	\$1,260,668	\$1,293,144	\$1,280,444	\$1,379,571	
Expenses										
Personnel services	\$78,105	\$82,230	\$75,120	\$91,210	\$92,724	\$96,433	\$100,290	\$104,302	\$108,474	
Expenses	49,553	55,676	76,369	64,725	67,425	70,122	72,927	75,844	78,878	
Shared costs	115,645	121,264	130,771	138,118	141,591	147,255	153,145	159,271	165,641	
Sewer collection charges Fitchburg	400,000	355,741	480,665	650,000	650,000	650,000	650,000	650,000	650,000	650,000
Sewer extension P&I	326,063	318,426	310,201	300,802	291,402	281,708	272,660	263,260	254,180	
Transfer to reserve fund	0	0	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Capital improvement program (CIP)	0	0	0	0	0	10,000	195,000	155,000	673,333	
Capital reserve	0	0	0	0	0	0	0	0	0	0
Total Expenses	\$969,366	\$933,337	\$1,073,126	\$1,254,855	\$1,253,142	\$1,265,518	\$1,454,022	\$1,417,676	\$1,940,506	
Net Revenue	-\$23,715	\$24,208	\$6,722	\$13,360	\$10,373	-\$4,850	-\$180,878	-\$137,232	-\$560,936	
% of Expenses	-2.4%	2.6%	0.6%	1.1%	0.8%	-0.4%	-11.1%	-9.7%	-28.9%	
Cumulative Revenue	-\$23,715	\$493	\$7,215	\$20,575	\$30,948	\$26,098	-\$134,780	-\$272,012	-\$832,948	
Minimum Charge First 6,000 Gallons (3)	\$158.125	\$158.125	\$56.304	\$94.620	\$94.620	\$94.620	\$94.62	\$94.620	\$ 94.620	
Usage Charge per 1,000 Gal > 6,000 (3)	\$6.325	\$6.325	\$9.384	\$15.770	\$15.770	\$15.770	\$15.770	\$15.770	\$ 15.770	
Annual Charge (semi-annual billing)										
Small User (30,000 gal/yr)	\$316	\$316	\$282	\$473	\$473	\$473	\$473	\$473	\$473	\$473
Medium User (90,000 gal/yr)	\$633	\$633	\$845	\$1,419	\$1,419	\$1,419	\$1,419	\$1,419	\$1,419	\$1,419
Large User (180,000 gal/yr)	\$1,202	\$1,202	\$1,689	\$2,839	\$2,839	\$2,839	\$2,839	\$2,839	\$2,839	\$2,839
Annual Increase in Percent (med user)	N/A	0.0%	33.5%	68.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taxpayer Cost per 100K Valuation (1)(2)	\$17.96	\$17.54	\$17.09	\$16.57	\$16.05	\$15.74	\$19.32	\$17.92	\$28.84	
(1) Based on 50% funding of existing P&I from general fund.										
(2) Based on 20% funding of CIP from general fund.										
(3) Minimum charge in FY 2010 and 2011 was for first 20,000 gallons semi-annually.										

WESTMINSTER WATER AND SEWER RATE STUDY
 PROJECTED SEWER REVENUES AND EXPENSES
 INCLUDES CAPITAL IMPROVEMENT PROGRAM AND SIPHON PROJECT
 UPDATED MARCH 2014

Present and Projected Sewer Revenues and Expenses										
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	
	Actual	Actual	Actual	Budget	Proposed	Projected	Projected	Projected	Projected	
Revenue										
Committed int add to tax	\$34,317	\$29,980	\$25,974	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Sewer usage charges	380,506	404,186	489,156	820,314	820,314	825,164	981,192	957,546	1,384,833	
Services, connection and inspection fees	12,940	9,316	56,233	9,000	9,000	9,000	9,000	9,000	9,000	
Liens	20,121	22,200	17,912	18,000	18,000	18,000	18,000	18,000	18,000	
Appt'd sewer betterments	85,328	91,284	82,642	80,000	80,000	80,000	80,000	80,000	80,000	
Investment income	10,900	9,611	6,743	9,000	9,000	9,000	9,000	9,000	9,000	
Transfers from general fund (1)	163,032	159,213	155,101	150,401	145,701	140,854	136,330	131,630	127,090	
Transfers from general fund for CIP (2)	0	0	0	0	0	2,000	39,000	31,000	108,000	
Transfers from general fund for siphon project (2)	0	0	0	0	0	0	0	0	110,250	
Miscellaneous charges	6,923	7,349	7,487	6,500	6,500	6,500	6,500	6,500	6,500	
Transfers from retained earnings	231,584	224,406	238,600	150,000	150,000	150,000	150,000	150,000	150,000	
Total Revenue	\$945,651	\$957,545	\$1,079,848	\$1,268,215	\$1,263,515	\$1,265,518	\$1,454,022	\$1,417,676	\$2,027,673	
Expenses										
Personnel services	\$78,105	\$82,230	\$75,120	\$91,210	\$92,724	\$96,433	\$100,290	\$104,302	\$108,474	
Expenses	49,553	55,676	76,369	64,725	67,425	70,122	72,927	75,844	78,878	
Shared costs	115,645	121,264	130,771	138,118	141,591	147,255	153,145	159,271	165,641	
Sewer collection charges Fitchburg	400,000	355,741	480,665	650,000	650,000	650,000	650,000	650,000	650,000	
Sewer extension P&I	326,063	318,426	310,201	300,802	291,402	281,708	272,660	263,260	254,180	
Transfer to reserve fund	0	0	0	10,000	10,000	10,000	10,000	10,000	10,000	
Capital improvement program (CIP)	0	0	0	0	0	10,000	195,000	155,000	540,000	
Siphon Project	0	0	0	0	0	0	0	0	220,500	
Capital reserve	0	0	0	0	0	0	0	0	0	
Total Expenses	\$969,366	\$933,337	\$1,073,126	\$1,254,855	\$1,253,142	\$1,265,518	\$1,454,022	\$1,417,676	\$2,027,673	
Net Revenue	-\$23,715	\$24,208	\$6,722	\$13,360	\$10,373	\$0	\$0	\$0	\$0	
% of Expenses	-2.4%	2.6%	0.6%	1.1%	0.8%	0.0%	0.0%	0.0%	0.0%	
Cumulative Revenue	-\$23,715	\$493	\$7,215	\$20,575	\$30,948	\$30,948	\$30,948	\$30,948	\$30,948	
Minimum Charge First 6,000 Gallons (3)	\$158.125	\$158.125	\$56.304	\$94.620	\$94.620	\$95.179	\$113.18	\$110.449	\$ 159.735	
Usage Charge per 1,000 Gal > 6,000 (3)	\$6.325	\$6.325	\$9.384	\$15.770	\$15.770	\$15.863	\$18.863	\$18.408	\$ 26.623	
Annual Charge (semi-annual billing)										
Small User (30,000 gal/yr)	\$316	\$316	\$282	\$473	\$473	\$476	\$566	\$552	\$799	
Medium User (90,000 gal/yr)	\$633	\$633	\$845	\$1,419	\$1,419	\$1,428	\$1,698	\$1,657	\$2,396	
Large User (180,000 gal/yr)	\$1,202	\$1,202	\$1,689	\$2,839	\$2,839	\$2,855	\$3,395	\$3,313	\$4,792	
Annual Increase in Percent (med user)	N/A	0.0%	33.5%	68.1%	0.0%	0.6%	18.9%	-2.4%	44.6%	
Taxpayer Cost per 100K Valuation (1)(2)	\$17.96	\$17.54	\$17.09	\$16.57	\$17.76	\$17.41	\$21.37	\$19.82	\$42.08	
(1) Based on 50% funding of existing P&I from general fund.										
(2) Based on 20% funding of CIP and 50% funding of siphon project from general fund.										
(3) Minimum charge in FY 2010 and 2011 was for first 20,000 gallons semi-annually.										